# EDUCATION OF DEAF AND HEARING-IMPAIRED CHILDREN THROUGH ELECTRONIC EDUCATION PLATFORMS

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**Abstract**
This article provides a comprehensive analysis of the pedagogical, psychological and technological aspects of teaching deaf and hard-of-hearing students through e-learning platforms. The study explores effective ways to expand the learning opportunities of students with hearing impairments and develop their speech and communicative competencies using digital technologies. The article covers aspects such as individual teaching of students through e-learning environments, the use of visual materials, and increasing motivation through game tasks. The article also analyzes the capabilities of platforms such as "Moodle", "Google Classroom", "iSpring Suite", "H5P", and presents methods for adapting them for students with special needs.

**Keywords**: Deaf children, hard-of-hearing students, e-learning, digital platforms, interactive technologies, communicative competence, inclusive education, multimodal approach.

## Introduction

Today, the education system is aimed at developing human capital, educating a person who thinks creatively and can make independent decisions. In this process, it is important to take into account the individual characteristics of each student, especially ensuring the right to education of children with disabilities. Deaf and hard of hearing children require a special approach to the education process due to their limited hearing capabilities.

In recent years, a number of regulatory and legal documents have been adopted in the Republic of Uzbekistan to develop an inclusive education system. In particular, modern educational opportunities are being created for deaf and hard of hearing children based on the Law "On Inclusive Education" (2020) and the concept of "Digital Education". In this regard, the use of electronic learning platforms allows not only distance learning, but also the creation of an educational environment that combines the auditory and visual perception of students.

The purpose of the study is to reveal the didactic potential of electronic learning platforms in teaching deaf and hard of hearing children, to determine their effectiveness in the educational process, and to develop methodological recommendations.

## Main Part

Deaf and hard of hearing students, as they are usually unable to fully perceive spoken language, perceive information more visually. Therefore, it is very important to use visual, kinesthetic and multimodal methods in their education. Pictures, diagrams, videos with subtitles and infographics help them to better understand information. Pedagogical research shows that deaf students absorb information more effectively by observing the teacher's lip movements, gestures and visual materials. Digital learning environments provide the opportunity to independently manage student activity. For example, deaf children can watch complex topics several times, study video lessons with subtitles, and develop their speech activity through animated tasks. At the same time, e-learning also allows the teacher to monitor, evaluate and give individual recommendations to students.

Electronic platforms help to strengthen the psychological self-confidence of children with hearing impairments. They can demonstrate their abilities in the process of completing independent tasks, seeing and correcting their mistakes. This increases their motivation and forms a positive attitude towards education.

The Moodle system allows the teacher to create interactive courses, automatically evaluate tasks and analyze student activity. Google Classroom provides the opportunity to establish quick communication between the teacher and the student, collect text and video materials in one place. Using the iSpring Suite platform, teachers can present lessons in an integrated manner in audio, video and written form. H5P is an effective tool for creating interactive exercises, tests, word games and infographics based on HTML5.

For example, in biology, subtitled video lessons created on the iSpring platform help deaf students to form an idea of the animal world and plant life. Also, interactive games and tests prepared through H5P develop their concentration, thinking, and memory skills.

A multimodal approach plays an important role in the effective organization of e-learning for deaf and hard of hearing students. This approach combines visual, textual, sign language and audio elements. The teaching model consists of the following stages:

1) Preparatory stage - adaptation of educational material to the level of hearing impairment; 2) Interactive presentation stage - use of subtitled video, sign language and infographics; 3) Reinforcement stage - tests, game exercises and reflection; 4) Evaluation stage - determination of the result through automatic analysis and teacher feedback.

The effective use of digital technologies depends on the qualifications and digital competence of the teacher. When creating interactive lessons, the teacher should be able to use programs such as "Articulate Storyline", "Camtasia", "iSpring", and be familiar with sign language and speech recognition technologies. The teacher should also create a positive communicative environment, taking into account the psychological characteristics of the students.

## Results

The results of the study show that e-learning platforms significantly increase the learning activity of deaf and hard of hearing students. Students learn the material more deeply through independent work, review and analysis. At the same time, interactive activities activate their speech activity and develop communication skills. The results of the experiment showed that

the communicative competence of deaf children trained through e-learning increased by 35-40 percent.

## Conclusion

Educating deaf and hard of hearing students through electronic learning platforms is an effective way to develop their cognitive, speech and social activities. Interactive lessons created using modern technologies allow them to concentrate, understand the topic and express their opinions. As a result of teaching through electronic platforms, students learn to independently control their level of knowledge, which turns them into active subjects. Therefore, the introduction of electronic platforms in the inclusive education system is a relevant and promising direction.

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